

AMENDMENT TO THE SPECIFICATION

In the Specification:

The following paragraph (the 2nd paragraph in the “DETAILED DESCRIPTION OF PREFERRED EMBODIMENT”) has been amended as shown.

This invention presents a coding method with which the bandwidth of the digits transmission medium is divided into many sub-channels. Two special frequencies are selected located at the two sides of the central frequency of the sub-channel. In the data transmission side, the pulse groups are generated corresponding to the two special frequencies. The duration time differences of the pulse groups are used to express the binary digits “0” and “1”. In this way pulse group duration coding is achieved. Shown as FIG.1, the central frequency is f_0 in sub-channel 1, the frequencies f_1 and f_2 located at the two sides of the central frequency are selected as the two special frequencies. The first pulse group 2 corresponding to the frequency f_0 has the duration time t_0 ; the second pulse group 3 corresponding to the frequency f_1 has the duration time t_1 . Notice that the first pulse group 2 and the second pulse group 3 have the same number of pulses, as the defined number n , and they have different frequencies. The first pulse group 2 and the second pulse group 3 have different duration time. The difference in pulse group duration time can be used to make difference between the two pulse groups and further more make the difference between the binary digits “0” and “1”. Shown as FIG.2, a binary digits “10011101” is corresponding to a sequence of pulse groups.